

**TECHNICAL REVIEW DOCUMENT**  
**For**  
**RENEWAL OF OPERATING PERMIT 03OPSU259**

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Summit County Landfill  
Summit County  
Source ID 1170017

Prepared by Bailey Smith  
June - July, 2011

**I. Purpose**

This document establishes the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed Operating Permit for the Summit County Landfill. The previous Operating Permit for this facility was issued on April 1, 2005, was last revised on June 4, 2008 and expired on April 1, 2010. However, since a timely and complete renewal application was submitted, under Colorado Regulation No. 3, Part C, Section IV.C all of the terms and conditions of the existing permit shall not expire until the renewal operating permit is issued and any previously extended permit shield continues in full force and operation.

This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted on January 13, 2009, previous inspection reports and various email correspondence with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

**II. Description of Source**

The Summit County Landfill is a municipal solid waste landfill and falls under the Standard Industrial Classification 4953. Landfill gas is generated from the decomposition of organic materials found in landfills. Landfill gas is primarily composed of methane and carbon dioxide. Volatile organic compounds (VOC) and hazardous air pollutants (HAP) are present in landfill gas in trace amounts. These landfill gases

escape from the landfill and are emitted into the air. Fugitive particulate emissions are generated from various activities at the landfill, including, excavation activities, soil cover handling and storage, and truck traffic on haul roads. A gasoline storage tank is also present at the facility.

This facility is located at 639 Landfill Road, Dillon, Summit County. The area in which the plant operates is designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of this facility. The following Federal Class I designated areas are within 100 kilometers of the plant: Maroon Bells-Snowmass Wilderness Area, Rocky Mountain National Park, Flat Tops Wilderness Area, and Eagles Nest Wilderness Area.

Based on the information provided by the applicant, this source is categorized as a minor stationary source for PSD as of the issue date of this permit. Any future modification which is major by itself (Potential to Emit of > 250 TPY) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

Gas emissions are calculated using EPA's LandGEM. The potential to emit is calculated using the Division approved NMOC concentration value of 956.4 ppmv as hexane, methane generation capacity of 100 m<sup>3</sup>/Mg and a methane generation rate of 0.02/yr for arid areas. The particulate matter potential emissions were calculated using equations and methodology from AP-42. Potential emissions (in tons/yr) at the facility are as follows:

Pollutant	PTE (tons/yr)
PM	12.8
PM <sub>10</sub>	48.8
VOC	13.9

Note that the facility is not major for Title V purposes. The facility is subject to NSPS Subpart WWW which requires all municipal solid waste landfills with a design capacity greater than 2.5 million megagrams or 2.5 million cubic meters to obtain an operating permit.

### **Applicable Requirements**

#### **Greenhouse Gases**

The potential to emit greenhouse gas from this facility is less than 100,000 TPY CO<sub>2</sub>e. Future modifications greater than 100,000 TPY CO<sub>2</sub>e may be subject to regulation. On July 20, 2011, a final rule regarding biogenic CO<sub>2</sub> emission was published in the Federal Register. This final action defers, for a period of three years, the application of the Prevention of Significant Deterioration (PSD) and Title V permitting requirements to carbon dioxide (CO<sub>2</sub>) emissions from bioenergy and other biogenic stationary sources (biogenic CO<sub>2</sub>). As it relates to this facility, biogenic CO<sub>2</sub> includes all CO<sub>2</sub> generated

from the biological decomposition of waste in landfills and CO<sub>2</sub> emissions from the combustion of biogas collected from the biological decomposition of waste in landfills. Note that the emission of biogenic methane is still a contributing factor in calculating greenhouse gas emissions from the facility.

#### NSPS Subpart WWW

This facility is subject to the provisions of 40 CFR Part 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills. The design capacity of the landfill is 3,416,828 Mg. Tier 2 test results were submitted December 27, 2007 and determined the site specific NMOC concentration to be 188 ppmv as hexane. The resulting estimated NMOC emission rate was 5.79 Mg/year. Based on this information, the facility is subject to the NSPS requirement to obtain a Title V permit and have not yet triggered the requirement to install a gas collection and control system. The facility is required to perform Tier 2 tests every 5 years and report results to the Division.

#### NESHAP Subpart CCCCC

There is one gasoline storage tank identified as insignificant activity in the renewal application under the provisions in Colorado Regulation No. 3, Part C, Sections II.E.3.fff. However, under the “catch-all” provisions in Regulation No. 3, Part C, Section II.E, sources that are subject to any federal or state applicable requirement, such as National Emission Standards for Hazardous Air Pollutants (NESHAPs), may not be considered insignificant activities for operating permit purposes. EPA promulgated National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities which apply to this tank; therefore, it can no longer be considered insignificant activity in the operating permit. Although the unit cannot be considered insignificant activity, since the Division has not yet adopted the rule, the tank is still exempt from APEN reporting and minor source construction permit requirements. The applicable requirements were included in the permit.

### **III. Discussion of Modifications Made**

#### **Source Requested Modifications**

The renewal application received on January 13, 2009 requested the following modifications:

- Include updated facility plot plan.
- Update insignificant activity list.

The source’s requested modifications were addressed as follows:

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- Revised the responsible official and permit contact information in accordance with information submitted on May 16, 2011.

#### Appendices

- Updated the list of insignificant activity and facility plot plan in Appendix A.

### **Other Modifications**

In addition to the source requested modifications, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal. These changes are as follows:

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- It should be noted that the monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).

#### **Section I – General Activities and Summary**

- Revised the language in Condition 1.4 to include current conditions that are state-only enforceable.
- Updated Condition 3.1 (status of source with respect to PSD requirements) to reflect Division's current standard language and current Regulation No. 3 citations.

#### **Section II – Specific Permit Terms**

- The annual VOC emission limitation was changed from 21.43 tons/yr to 13.9 tons/yr. The site-specific NMOC concentration is expected to fluctuate with each Tier 2 test. To avoid potential compliance issues, Summit County based their previous limit on a NMOC concentration of 1,550 ppmv as hexane instead of the latest site-specific NMOC concentration of 188 ppmv as hexane. The updated VOC limit is based on LandGEM results using a Division approved NMOC concentration of 956 ppmv as hexane. The 956 ppmv as hexane value was developed through testing of several Colorado landfills. The VOC limit is set to include a buffer for potential fluctuations and the facility will calculate actual emissions based on site-specific NMOC concentration determined from the latest Tier 2 test. Note that the operating permit's annual limitations have been set using a methane generation capacity of 100 m<sup>3</sup>/Mg instead of the NSPS Subpart WWW default value of 170 m<sup>3</sup>/Mg and actual emissions will be calculated using this lower value. The NMOC emission rates calculated in accordance with NSPS Subpart WWW will still use the default value of 170 m<sup>3</sup>/Mg.
- The particulate matter annual limit condition was reworded to clarify that presumed compliance is a function of both waste acceptance rates and dust control practices.

- Deleted the fugitive emissions opacity guidelines (20%, off-property transport, nuisance) since they are not enforceable.
- A condition was added for design capacity. If the design capacity is changed, the facility must submit an amended design capacity report to the Division.
- Removed requirements from fugitive dust plan to require shutdown due to high winds. Colorado solid waste regulations require the facility not to operate in extreme winds and therefore the requirement is unnecessary for this permit.
- Removed requirement for facility to semi-annually certify compliance with the Fugitive Control Dust Plan. This is already a requirement as the facility must submit semi-annual deviation reports.
- Provided a more detailed explanation of the NSPS Subpart WWW requirements applicable to the facility.
- Added the applicable requirements for the gasoline tank as discussed above.

#### Section IV – General Permit Conditions

- Updated the general permit conditions to the current version (11/16/2010).

#### Appendices

- Waste oil furnaces were added to the insignificant activity list in Appendix A.
- Cleared the list of modifications from Appendix F related to the previous issuance.